

Splash of Color

What you need:

- 3 clear plastic cups
- water
- cooking oil
- liquid food coloring
- pencil

What to do:

1. Check with a grown-up before you begin.
2. Fill one cup about $\frac{2}{3}$ full of water and another about $\frac{2}{3}$ full of oil.
3. Add a few drops of food coloring to each cup. Leave space between the drops so they don't touch. Watch what happens.
4. Now fill the third cup about $\frac{2}{3}$ full of water. Pour in enough cooking oil so it forms a thin layer on top of the water.
5. What do you think will happen if you add food coloring to this last cup? Make a prediction and then test it out.
6. Touch one of the drops of food coloring in the last cup with the tip of a pencil.



What happens?

When you add food coloring to water, it mixes in. When you add food coloring to oil, it stays in a little ball and does not mix in. Why? Food coloring is mostly made of water, and water and oil don't mix. Even if you stir them, the oil separates and forms a layer on top of the water. So when you add food coloring to the cup that has water and oil, each drop is coated with oil. That is why the drops sit in the oil layer. The oil is like a raft that helps the food coloring float. If you poke a drop with a pencil, the oil layer is broken. Then the food coloring mixes with the water and makes a cool design.